Solomon's seaport on the Red Sea; Dr. Samuel N. Kramer, formerly fellow at the Baghdad School, describes a new Sumerian religious text of epochmaking value to historians of religion; Professor C. C. Torrey of Yale, the first director of the School in Jerusalem and long chairman of our Managing Committee, describes a remarkable unpublished Hebrew seal, from the collection of one of our trustees. In this number of the BULLETIN we have the first publication of two Hebrew seals bearing the names of kings of Judah hitherto not represented by Palestinian monuments: Jotham and his son Ahaz, the contemporaries of Isaiah.

In the terrible time through which the world is passing the members and friends of the Schools can do no better than to hold the torch aloft as steadfastly as possible. After the end of the present war Europe will probably not be able to carry on the scholarly and scientific traditions of the West for some time, if at all. If the unity and the autonomy of learning are to be kept alive, the task will fall in large part to American scholarship. We dare not, therefore, allow any branch of creative investigation to languish. Ours is not only the privilege of continuing work which we love and which we know to be significant, but also the duty of keeping the spark of vital flame in our field from flickering and expiring.

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THE THIRD SEASON OF EXCAVATION AT TELL EL-KHELEIFEH

NELSON GLUECK

The third season's campaign of excavations at Tell el-Kheleifeh ¹ extended from March 5 to May 15, 1940. It was conducted under the direction of the writer on behalf of the American School of Oriental Research in Jerusalem and the Smithsonian Institution in Washington. Additional funds

¹ BULLETIN 71, pp. 3-18; 72, pp. 2-13; 75, pp. 8-22.

were obtained from the Felix M. Warburg Fund of the American Schools of Oriental Research. Among the other members of the staff were Dr. and Mrs. Harold Glidden, Mr. J. Pinkerfeld, and Dr. Albert K. Henschel. All the excavation photographs were taken by Dr. Glidden. Through the courtesy of the Director of the Palestine Department of Antiquities, the object photographs were made by Mr. S. J. Schweig. Particular thanks are due to Mr. A. S. Kirkbride, British Resident, Transjordan, to Major J. B. Glubb, Officer Commanding the Arab Legion, Transjordan, and to Mr. Lankester Harding, Chief Curator, Transjordan Department of Anti-

quities, for the great help they rendered to our expedition.

The results of the season's work emphasized again that the intricate smelter-refinery of Ezion-geber: Elath was from the very beginning till near the end of the history of the place considered to be its most important structure. It underwent numerous changes in the course of time. The system of flues and air-channels in the walls was abandoned after they had become filled with sand and soot. The flue-holes were plastered over, and the smelting process reverted to the use of hand-bellows. In this wise, the great industrial plant continued to function for a number of centuries longer. The tremendous heat in the furnace rooms of the smelter, transformed the sun-dried bricks used in its construction into the equivalent of kiln-baked bricks. The copper sulphide fumes of the copper ores being reduced in the smelter turned its walls green; where the fumes did not come in direct contact with the walls, the heat turned them brown and red. Centuries of experience had produced a brick measuring 40 by 20 by 10 centimeters, with which an excellent wall two and a half bricks thick could be produced, of enduring strength. Some of the walls of the smelter have stood almost to their original height for nearly thirty centuries.

When finally heat cracked the walls of the smelter in places, and repairs and reenforcements were necessary, a means of strengthening them was employed, which had hitherto been applied only to fortresses. A sloping retaining wall in all respects similar to a fortification glacis, was discovered during the third season of work, built against each side of the smelter. It was almost half again as wide at the bottom as the smelter walls themselves. Each row of bricks in this supporting ramp was set about two centimeters back of the preceding row, so that by the time the top of the inward slope of the glacis reached the top of the smelter wall, only the width of the smelter wall remained. The outer, very steep slope of this glacis was then covered with a thick facing of strong mud-mortar, which effectively hid all the irregularities of the tiny steps of its successively graduated rows of bricks, and presented a surface so smooth as not to afford a toe-hold to any one desirous of ascending it. Although the glacis around the smelter can in no wise be distinguished from a fortification glacis, it was intended not so much to keep out an enemy as to bolster up the walls of the smelter.

The strength of this smelter glaçis was, furthermore, enhanced by the fact that while its outer face sloped inward as it went upward, the rows of bricks in it sloped downward somewhat toward the face of each of the walls against which the glaçis was built. In addition, the builders of this glaçis (and others like it in a later period at Tell el-Kheleifeh), employed a principle of tying the bricks to each other that was commonly used, for in-

stance, in the Renaissance Period in Europe, particularly for fortress construction. The bricks were laid in complex, diagonal cross-patterns. It is the strongest form of brick bonding known to man, and must already have been old when used by the brick-masons of Ezion-geber. By ascertaining the degree of the angle of the slope of the glacis around the smelter, both the height of the glacis and the original height of the walls against which it was built could be obtained. Allowing for the upward extension of the walls of the smelter above the top of the glacis, it is possible to say that the smelter walls were about twelve feet high. There was no roof over the smelter.

The smelter-refinery was literally the center of the first Ezion-geber, or Ezion-geber I, as we shall call it. Some distance removed from it, and around it, was built a square of foundry and factory rooms. This industrial square was only one room thick. The rooms were formed by thin partition walls between the spaced, parallel inner and outer walls. seems to have been an entrance guarded by a strong square tower on the southwest side. The plan of the smelter, together with the industrial square, may be likened somewhat to that of a strong stockade wall, with a row of houses one room thick built against the inside of the walls of the stockade square, and with an isolated, commanding building in the center of the square. There is, furthermore, some reason for believing that considerably beyond the industrial square, whose outer wall is strengthened like a fortress wall with regular offsets, there was also in the very first period an outer, complex fortification system, consisting of two separate walls, with a glacis built against each of them, and a dry moat between the two walls. All traces of it have disappeared because of a later fortification system much like it, which completely displaced it.

Both the smelter and parts of the industrial square were used and reused in later periods. Indeed, one of the main difficulties of the excavations consisted in just this fact—that wherever a later age found a good wall of a previous one, it frequently built other walls against it to form a new room. The employment of a straight stratigraphic method of excavation at Tell el-Kheleifeh, however desirable it may be generally, would have produced dire results. The problems of unravelling the puzzles of walls there, built against each other, yet frequently belonging to totally different periods, were baffling at first appearance, but usually could be solved. The frequent use of different types of bricks and different methods of bricklaying in different periods helped to distinguish one period from another. In certain parts of Tell el-Kheleifeh, walls of successive periods were built on respectively higher levels.

The idea previously expressed as a result of the first two seasons of excavations, and based also partly on literary evidence, that the smelter and foundries and factories at Ezion-geber: Elath were manned by slave labor, was further supported as a result of the finds and experiences of the work of the third season. The fumes and smoke from the smelter-refinery alone, coupled with the severity of the natural conditions, would have made life there intolerable to the free born, and impossible for slaves. The welfare of the latter, however, would hardly have been taken into consideration. The rate of mortality among the slaves must have been terrific. This was the longest of the three seasons of excavations, lasting for two and a half months. At its close, the members of the staff were near the point of physical

exhaustion. At one time, for instance, for ten days on end, there were uninterrupted sandstorms of such severity over Tell el-Kheleifeh that often one could not see more than about twenty-five feet away. A considerable portion of the rooms on the north side of the mound, which had been excavated during the first two campaigns, was found to have been filled with sand at the commencement of the third season. Particularly during the first two main periods of occupation of Ezion-geber, when industrial operations were carried out more intensively than in any of the subsequent periods, at least the free population must be thought of as residing farther to the east, nearer the modern village of 'Agabah, where there is more protection from the winds and the sands in the lee of the hills and where the drinking water is almost completely non-brackish. The permanent population of Ezion-geber: Elath was never large, numbering probably not more than two or three hundred. During the essentially seasonal industrial activity there, the population figures must have increased considerably with the importation of slave labor. While the officers and merchants may have tented some distance away from the furnaces and foundries, the slaves, however, upon whom the main burden of the work fell, were probably confined inside the walled area. With them must have been a changing guard of a certain number of soldiers to control them and guard the site. already been seen from previous reports, in addition to being the "Pittsburgh of Palestine," Ezion-geber: Elath was also a strong fortress, guarding the crossroads by land and sea between Arabia and Sinai and greater Palestine. The new fortress at 'Agabah, recently completed by the Transjordan government, although much smaller, serves in a limited way the same purpose.

The Egyptian king Shoshenk, or Shishak, as he is known in the Bible, was in all probability the one who destroyed the Ezion-geber of Solomon.² He seems to have been content to gain control of the site, perhaps after breaking down its outer defences. The smelter-refinery and the industrial square of rooms beyond it, remained more or less intact. Indeed, the Egyptian attack may have been intended, like the successful conquest of Megiddo (Armageddon) by the same invader, not merely to reduce an enemy stronghold, but primarily in this instance to gain possession of the important industrial plant so strategically situated on the north shore of the Red Sea. His control of the place was short-lived. Thereafter, the possession of it revolved between the Judaeans and the Edomites.

Sometime after the reoccupation of Ezion-geber by the Judaeans, after it had been seized by Shishak near the end of the tenth century B. C., it was extensively rebuilt. A new series of fortification walls was put up, partly on the lines of the former ones, and partly on entirely different lines. The smelter-refinery, which still remained the most important building, was no longer in the center of the site, but at its northwest corner. The new fortification system was of great strength. It consisted of two lines of defences (Figs. 2-3). There was a very strong inner wall, strengthened by regular offsets along its outer side. It was from seven and a half to nine feet thick (the latter measurement at the offsets), and was originally some twenty-five feet high. It was further strengthened by a strong glacis built against it, with corresponding offsets. About nine feet beyond the base of the glacis

² Bulletin 75, pp. 17-18.

was another fortification wall, about three feet thick and ten feet high. It too seems to have been further strengthened by a glacis built against it. It is probable that both this wall and the glacis against it had offsets corresponding to those of the parallel inner wall and glacis. Between the two walls ran a dry moat, the bottom of which was marked by a stamped clay and mud-brick floor. At the corners of the major wall were towers, which in each instance overlooked the slopes of its glacis. The smaller outer wall is much less well preserved than the larger wall, but it seems probable that it too had similar towers, one at each corner.

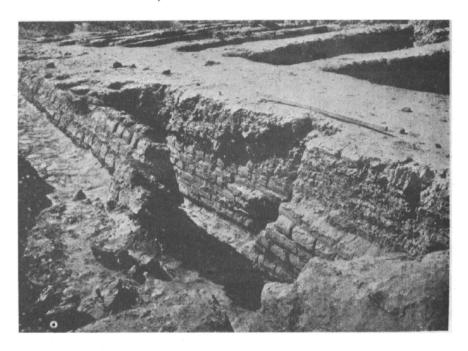


Fig. 2. A section of the outer fortifications with an offset in the city wall and the glacis which was built against it.

On the south side near the southwest corner is the monumental gateway, with three pairs of doors and two opposite sets of guard-rooms between them, which has previously been described. The glacis of each of the outer fortification walls is broken off before arriving at the gate, so it is impossible to say exactly what the connection between them and the gate was. This double walled fortification extended a considerable distance south and east, respectively, of the industrial square, built in the preceding period of Ezion-geber I. On the north side, and part of the west side, however, it cut through and in part was built over the line of rooms of this industrial square, with no attempt to make use of its rooms on these sides. The

³ Bulletin 75, pp. 13-14.

rooms of the industrial square on the other two sides were reused. The north half of the outermost glacis on the west side was built against the outermost west wall of the industrial square. It is interesting to note that

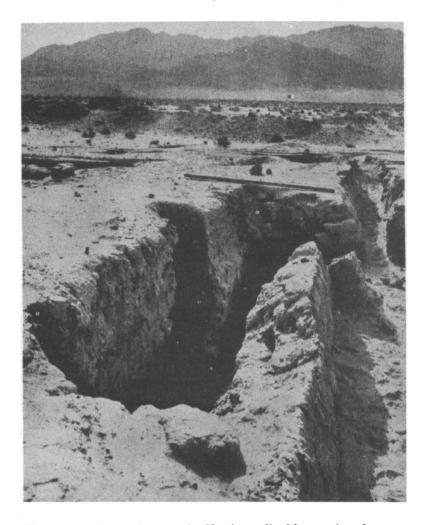


Fig. 3. An offset in the outer fortification wall with a section of the glacis in front of it.

the scheme of double-walled outer defences with a dry moat between the walls is known elsewhere in Transjordan. It is particularly clear there at the Early Iron Age site of Khirbet el-Medeiyineh overlooking the Wadi

^{*}Cf. Galling, Biblisches Reallexikon, p. 372; Albright, Annual IV, p. 19; Olmstead, History of Palestine and Syria, pp. 125. 137. 197. 258. 408. 620.

Themed.⁵ It is difficult to understand why the builders of this complex fortification scheme in Ezion-geber II did not extend the outer walls beyond the north and west sides of the industrial square as they had on the south and east sides. Indeed, on the north side, the larger of the two fortification walls was built partly over the north side of the smelter, and over the glacis built against the smelter on that side in the preceding period of

Ezion-geber I.

If Ezion-geber I, or Period I, is to be assigned to the tenth and part of the ninth century B. C., and its most important phase to the time of king Solomon, then perhaps Ezion-geber II may be assigned to the ninth century More particularly, Period II may represent a reconstruction by Jehoshaphat of Judah, who reigned about 873-849 B.C. He was the one. it will be recalled, who made the abortive attempt to revive the sea-trade between Ezion-geber and Arabia, which had flourished during the reign of Solomon. We are told that Jehoshaphat had a new fleet of Tarshish ships built to sail to Ophir for gold. No sooner were they completed, however, than a gale blew them on the rocks several miles from Ezion-geber, where they foundered. The venture was thereupon abandoned. The very attempt, however, must have meant that Ezion-geber received a new lease of life. Its defences were restored and its industrial activities renewed with full intensity. Exports, such as ingots and objects of copper and iron must have been made ready for the ships to carry to Arabia in return for the products obtainable there. After the destruction of his fleet, Jehoshaphat may have relied upon camel caravans for transport.

It should be borne in mind that the entire fortified area of Ezion-geber comprises little more than an acre and a half. Yet it was enclosed by walls (each of which was further strengthened by a glacis), of a height and thickness which would have done credit to an ancient town-site ten times the size of Ezion-geber. The total thickness of the larger of the two outer fortification walls plus its glacis, taken at a point parallel with the base of the glacis, is some fifteen feet. A type of bricks completely different from any used previously was employed in the construction of the new

fortifications.

It is significant that the offsets of the new fortification walls and of each glacis of Period II are parallel to the offsets of the outer wall of the industrial square of Period I. Furthermore, the bricks of the glacis built against each of the fortification walls of Period II, were laid in the same diagonal, criss-cross fashion as the bricks in the glacis built in Period I against the smelter-refinery. Were it not for the indubitable fact that part of this great fortification scheme of Period II in places cuts through, and in other places is built over part of the rooms of the industrial square and the north side of the smelter-refinery, with its glacis of Period I, it would be possible to say that they are all to be assigned to the same period and to overlook the difference in types of bricks used in the various constructions. The close relationship in manner of construction between the later fortification walls and glacis and the earlier ones, makes it seem probable that the Period II fortification scheme replaced a similar earlier one. The tradition of building and even details of the plan remained essentially the same—Solomonic

Annual XIV, p. 13; Glueck, The Other Side of the Jordan, p. 143, fig. 75.

in character. It is for this reason, therefore, in addition to others which cannot be detailed here, that we maintain that the original smelter-refinery and the industrial square beyond it, as well as its outer fortification system, which that of Period II seems to have imitated and replaced, belong to the time of Solomon. They were the direct result of his great program of public works, which dotted Palestine with buildings of all kinds.

A most interesting grave was found during the third campaign, sunk partly into the floor-level of the dry most between the two outer fortification walls of Period II on the north side, a short distance removed from the smelter-refinery (Fig. 4). It may possibly be the grave of the man who

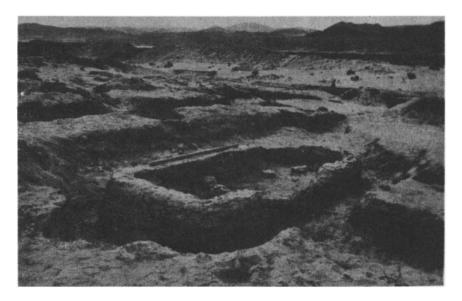


Fig. 4. A "mastabah" grave in Ezion-geber, looking southwest toward Sinai.

directed the construction of this elaborate system of fortifications, and who died perhaps shortly after the walls were completed. The top of the large, mud-brick, mastabah-like grave was covered by a layer of granite boulders, resting over a mud-brick roof. The grave had already been anciently disturbed, and whatever of intrinsic value it contained stolen, probably by some one familiar with its contents. An interesting amount of material still remained in the grave, however, when we opened it up. It was found to contain a large number of human, animal, and fish bones, most of which, unfortunately, had almost completely disintegrated. It soon became obvious that only one person had been buried there. Several fragments of the skull were recovered, as well as part of a lower jawbone, with several teeth still embedded in it. Careful sifting of the debris in the grave yielded 24 human teeth. With the dead person, probably a man, were found the remains of a camel. It may well have been his favorite dhalûl, his racing

camel. By the skull fragments were two three-handled jars, the only ones of the type recovered in the excavations. Inside one of them was a delicate little bowl, containing bones of a small bird, a small animal, and a fish (Fig. 5). The joints of the spine of a large fish could be seen in position. The last meal provided for the final journey of the buried man was a sumptuous one. A millstone, a mortar, and a fragment of a cosmetic palette were also found in the grave. This burial is the earliest one belonging to an historic period ever discovered in a controlled excavation in Transjordan. Trenches were run in all directions from this one grave in an attempt to discover others, but in vain. It seems safe to assume, however,

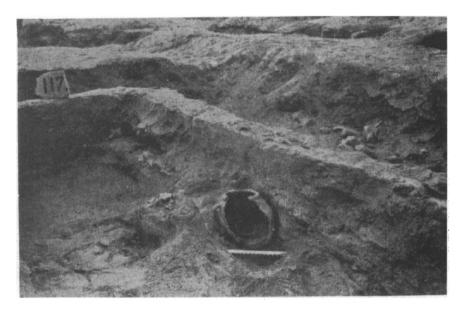


Fig. 5. A three-handled jar with a small bowl inside it from the "mastabah" grave.

that there could not have been many burials as comparatively elaborate as the grave in the dry moat. The bricks in the rectangular grave were of the same size as those in the fortification walls of Period II. The walls of the grave were quite thin, having the thickness only of the width of a brick.

The rectangular grave measured about 12 by 5 feet.

Not only was it possible to trace the complete line of the fortifications of this period, but part of the very brickyard was discovered, from which the bricks were taken for the building of the fortification walls. It is to be remembered that in Period II, the site was still more on the order of a large caravanserai than of a settlement proper. With the exception of the smelter-refinery, and the south and east sides of the industrial square which had escaped being destroyed or built over, and were consequently reused in Period II, there was nothing else inside the enclosure formed by the fortifi-

cation walls. There remained a great courtyard, in which the trading caravans may have rested at night time. At the southeast corner of this great compound were left long rows of rectangular bricks, of exactly the same size as those used in the construction of the fortification walls of Period II. For the construction of these walls thousands upon thousands of sun-dried mud-bricks were necessary. The areas inside and outside the proposed lines of the fortification walls were transformed into huge brick-yards. Bricks were made, and then laid out to dry in symmetrical rows, with spaces between each row, and spaces between each brick, to enable the rays of the sun to get at each brick from all directions. First the bricks



Fig. 6. A part of the brickyard of Period II, over which were built walls of Period III.

were laid flat, and then placed on their sides. As soon as they had dried, they were brought to the brick-layers, who with great skill placed them in long and intricate rows of headers and stretchers till the walls of the desired thickness and height were obtained. When the new fortifications were finished, hundreds of bricks still remained in position in the southeast corner of the compound, where they had been placed to dry during the last stages of construction. In time, both before and after the settlement of Period II had been destroyed, they were covered with debris and sand, and were completely lost sight of, and forgotten. In the following Period III, new houses were built over the buried rows of bricks, which could have been used in the construction of these houses had their builders but known of their existence (Fig. 6).

The bricks of Tell el-Kheleifeh were, on the whole, exceedingly well made.

Good clay, obtainable directly on the site, was used. It was mixed with straw of a kind, perhaps palm tree fibers, which served as an excellent binding material. Usually, in addition, charcoal and fragments of shells and bones were mixed in with the clay. In ancient Egypt, it was correctly thought to be the height of hardship to be compelled to make bricks without being supplied with the necessary complement of straw. We read in Exodus 5, 10 ff.: "And on that day Pharaoh commanded the taskmasters of the people and their officers, saying, 'Ye shall no more give the people straw for themselves; nevertheless, ye shall still exact from them the same number of bricks as they previously made, nor shall ye reduce the number." An idea of the excellence of the ancient bricks found in Tell el-Kheleifeh can be obtained by comparing them with the modern, sun-dried bricks used in present day 'Agabah. In April, 1940, a terrific rain- and hail-storm literally washed half of the mud-brick village away. Many of the mudbrick walls simply dissolved. A few days later, the natives began to make new mud-bricks, and dry them in the sun, preparatory to repairing the Their bricks were made without any binding materials whatsoever, except lumps of dried mud from which the sand content had been more or less washed away by the rains. Small wonder that such bricks go to pieces during the first heavy rain! With some trepidation, we returned to the excavations after the rains were over, to see what damage had been done to the exposed ancient mud-brick walls of Tell el-Kheleifeh. upon our arrival that not only had they not suffered at all but that even the unattached bricks of the ancient brickyard had not suffered the slightest harm. It is not surprising, therefore, that the mud-brick walls of Eziongeber: Elath, built more than twenty-five hundred years ago, have survived in some instances almost intact, while the mud-brick walls of modern 'Agabah crumble and collapse not long after they are built.

The settlement of Period III was built partly over, and partly against the walls of Period II, and utilized the old line of fortification walls. easiest way of distinguishing the settlement of Period III from that of Period II, at least in the southeast corner, is that its walls rest on the debris and sand covering the remaining lines of bricks of the brickyard of Period II. In several instances, the foundations of the walls of Period III encountered and cut through some of the bricks of Period II, which had been placed on their sides in the second stage of drying. The builders of Period III must have thought that these were isolated bricks. Had they dug down less than a foot, they would have found all of the old bricks, and would undoubtedly have utilized them in their new buildings. In addition to making use of the smelter-refinery, and the still existing rooms of the industrial square, the entire area of the rest of the site was filled with houses in Period III. For the first time in its history, the place assumed the semblance of a real village, and not merely a large, fortified, industrial plant. Essentially, however, it remained an industrial settlement, with obviously a large amount of industrial work carried on also in private houses.

If the settlement of Period I is to be assigned to the tenth-ninth centuries B. C., and that of Period II to the ninth century B. C., the settlement of Period III is to be assigned to the eighth century B. C., when it became known as Elath. It may have been constructed by Uzziah, who ruled from about 779 to 740 B. C. It is said of him in the Bible that he "(re) built

Elath and restored it to Judah." 6 It remained then in the hands of the Judaeans through the short reign of Jotham from about 740 to 736 B.C., until the time of Uzziah's grandson Ahaz. It was during his reign that in 735 B. C., taking advantage of the Syro-Ephraimitic war, the Edomites drove the Judaeans out of Elath and regained possession of it for themselves. It was apparently never again ruled by a Judaean king. Thus ended the two hundred year struggle between the Judaeans and the Edomites for the possession of Ezion-geber: Elath. For the Judaeans, it was not only the all important industrial site of their kingdom, but was most effectively the key of the gateway to Arabia by land and by sea. The orientation of Judah was always more to the south and southeast than to the west and north. Culturally, the desert days were always considered to represent the golden past by the prophets of Israel. Economically, Arabia always represented for the kingdom of Judah the golden present. For Edom, the roads to Arabia Felix were certainly no less important than for her neighbor to the west. With equal tenacity, she fought for the control of them, though only with occasional success until near the end of the eighth century B. C. Edom remained then, apparently, in possession of Elath to about the end of the sixth century B.C., after which it must have come under Persian control.

After the settlement of Period III had been destroyed by a terrific conflagration, a completely new industrial village was built over its ruins. This settlement of Period IV was Edomite. Its history can be divided into three clear sub-periods. The history of Period IV extended from about the end of the eighth century B. C. to about the end of the sixth century B. C. The new industrial village continued, like that of Period III, to use the system of fortifications that had been erected in Period II. Industrial operations continued on a fairly extensive scale. It is to the first phase of Period IV, which probably extended well down into the seventh century B. C., that we now assign the jars discovered in the previous season of excavations, stamped with a royal seal in ancient Hebrew-Edomite characters reading: "Belonging to QAUSANAL, the Servant of the King." It is thus now possible archaeologically to fix a date for the Qausanal seal impressions which harmonizes with the one proposed for them by Albright on the basis of epigraphy alone.7 Qausanal is a typical Edomite name, the first part of which, QAUS, is the name of a well known Edomite and then Nabataean deity.8 It seems likely that this Qausanal, who was probably an Edomite, was the officer commanding the district of Elath and was the representative ("servant") of the Edomite king of the time.

In a room belonging to Period III, was found a beautiful signet ring (Figs. 8-9). The seal itself, enclosed in a copper casing, had incised on it in retrograde, in the clearest possible ancient Hebrew characters, the following inscription: LYTM, "belonging to Jotham." Below the inscription is a beautifully carved, horned ram, which seems to be Syrian in style. In front of the ram seems to be the figure of a man. It cannot definitely be proven that the YTM of the seal is the very king of Judah, whose dominion

* BULLETIN 72, pp. 11-12.

⁶ Annual XV, p. 52, n. 143; BULLETIN 72, pp. 7-8.

⁷ BULLETIN 71, p. 18; 72, p. 13, n. 45.



Fig. 7. An eight-handled jar with a potter's mark.



Fig. 8. Side view of the seal of Jotham (approximately life size).



Fig. 9. Impression of the seal of Jotham (enlarged three times).

included also Elath, but the likelihood is a strong one. Even if this Jotham was merely the governor of Elath, he was apparently a Judaean. In all events, it is quite appropriate that during the period of Judaean control over Elath extending throughout the reigns of Uzziah, Jotham, and the beginning of the reign of Ahaz, the Hebrew name of Jotham should be found, while during the Edomite rule of Period IV, the Edomite name of Qausanal should occur.

To a later phase of the Edomite settlement of Period IV belongs a small store-room near the southeast end of the mound. In it were four beautiful jars, three of them as intact, with the exception of a crack in one of them. as when they left the potter's wheel about twenty-five hundred years ago. One of the jars was partly broken. The mouth of this jar had been closed with a heavy stone stopper, and further sealed with a clay covering, over which a large, curved fragment of pottery had been placed. The heavy debris which had fallen on top of the jars, when Period IV was destroyed, had resulted in the cracking of the jar and the partial crushing of its top by the stone stopper. As a result, the obviously valuable contents of the jar had seeped out or evaporated. Another one of these storage jars was found to be full of resin, as sweet smelling today as it was two and a half millennia ago. When this jar had been removed from the ground and left for a while at a tilted angle in the sun, the resin began to melt and flow over the mouth of the jar. It is a matter of speculation for what purpose this store of resin may have been intended in Elath. Some of the resin may have been used, for instance, in the ship-building industry which flourished at Ezion-geber and its successor Elath. More of it was used, in all probability, in connection with the smelting and refining and metal manufacturing activities carried on so intensively there.

The settlements of Period IV were destroyed in turn, and a new indus-

" It appears to me that the identification is almost certain. The absence of the usual patronymic suggests that the owner of the seal was a very important person and this impression is amply confirmed by the beautiful execution of the seal itself. A date between cir. 750 and 650 is fixed both stratigraphically and epigraphically. High officials seem always to have given their titles or the general title "servant of the king." If the seal belonged to Jotham as crown-prince, we might expect the usual addition, often found in Jewish seals, "son of the king." If it belonged to him as regent or as king no addition would have been needed. We know from ample material that Near-Eastern rulers often had their seals made in numerous examples, to facilitate the execution of royal business, so the copper or bronze (instead of silver or gold) mounting need occasion no difficulty. The name is very instructive. We can hardly read it Yôtam, since this name would then have been pronounced Yahutam, Yautam, or the like, and would have been written YWTM. Nor is it probable that Nöldeke and Gray were correct in preferring to identify the name with Heb. yātôm, "orphan," though this appears as a personal name (YTWM) at Elephantine (on this question see Noth, Die israclitischen Personennamen, p. 189 f. and n. 7). We have here an abbreviated name (hypocoristicon), either of the type "Ahaz" (Assyr. Yauhazi, i.e., "Jehoahaz") in which the divine name has been dropped, or of YWKN and YWQM, Yaukin (Babyl. Yaukinu) and Yauqim, for "Joiachin" and "Joiakim," respectively (cf. Jour. Bib. Lit., 1932, pp. 80 ff.). I am inclined to think that the biblical spelling YWTM reflects an original *Yahu-yatom or *Yahu-yittom (lit., "May Yahweh Finish"), which became Yautom by haplography (exactly like a number of other biblical names) and Yôtām by further contraction and dissimilation (Greek *Iôtham). Then the YTM of the seal stands for the abbreviated Yatom or Yittom, where the divine element is dropped.-W. F. A.

trial village was built, with its walls, for the most part, on lines entirely different from those of the previous ones. Not much of the settlement of Period V is left, but it had possibly two phases. Its history lasted from about the end of the sixth century or the first part of the fifth century B. C. down to the fourth century B. C. To this last settlement of Period V belong numerous sherds of Greek pottery transported from Athens to Gaza by ship and sent then by camel train to the north shore of the Red Sea, and reexported from there to Arabia. In these Greek jars were contained wines and other products shipped to Elath, and thence to Arabia, in return for the incense and spices and other wares obtainable there. Aramaic ostraca were found in this level during the previous season, belonging to the fifthfourth centuries B. C., and thus in part contemporary with the Attic wares found with them. One of the ostraca was a wine receipt. 10 One important new ostracon was discovered this season. It consisted of a fragment of an eighth-seventh century cooking pot, with profiled rim and loop-handle. The ink inscription was on the inside surface of the sherd. It made a very convenient piece of writing material, because the scribe could grasp the handle of the fragment of pottery, while he dipped his brush into the vegetable ink and brushed on the letters, many of whose lines, unfortunately, are very faint. The inscription, however, is Aramaic, and contemporary with the ostraca previously discovered, despite the fact that the sherd itself belongs to an earlier age. The settlement of Period V was the last one to be built on the site. The next one was moved to Aila, near 'Agabah, and owes its origin to the Nabataeans and its present repute to the Romans, who made it the end of the famous highway of Trajan.

In one of the houses which may be assigned to Period IV was found a pottery plaque representing the pregnant Mother-Goddess, the goddess of fertility. It was made with conspicuous crudeness, and is startlingly ugly. It must have been considered crude and ugly even when it was first fashioned. Why the potters of Ezion-geber: Elath chose to turn out figurines of deities in such ungracious forms, when at the same time some of the pottery they produced was of exquisite shape with beautiful decorations, is beyond comprehension. Was it the desire to reproduce something to which the crudity of the elemental was still attached? A figurine of equal ugliness, representing the same type of fertility goddess, was found in another room. With it was found a tiny cup, in which incense may have been burned. It is reasonable to believe that at Ezion-geber: Elath, on a junction of the great incense routes betweeen Arabia and Palestine and Syria, this commodity must have been comparatively cheap. The favor of the gods must have been sought in clouds of sweet smelling smoke. The piety of the people induced them also, when building a new house, to place some sort of a foundation offering under one of the walls. These offerings consisted at Elath of pots filled with fruits of the ground and fowl of the air and fish of the sea. In one instance a number of household utensils was carefully placed in a pot, and the wall was then built over this foundation offering.

All manner of copper and iron objects were discovered again in the excavations of the third season. They included copper fish-hooks, iron gaff-heads with barbed points, copper arrow-heads and spear-points, fibulae,

¹⁰ BULLETIN 75, p. 21,

fragments of fine copper dishes and tools, iron hoes and knives. It seems likely that the coppersmiths of Ezion-geber: Elath, like their Egyptian contemporaries, possessed the secret of tempering copper to such a degree of hardness that it could be used for tools and drills. For both fine and coarse work, however, stone hammers and drills were also used, in addition to metal tools. Fine quartz pebbles were found, obviously brought in from elsewhere, which had evidently been used, to judge from their abraded ends, as hammers to shape fine metal jewelry. Other hard stones of varying sizes and coarseness were notched and grooved, so that a forked handle could be tied to them with thongs. Similar stone hammers were commonly

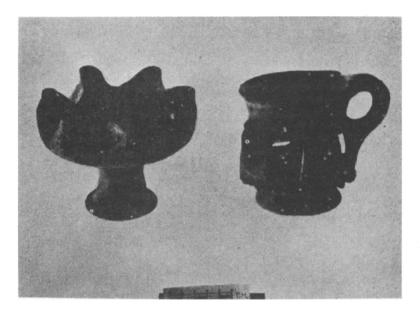


Fig. 10. On the left, a stand-lamp with seven spouts; on the right, a pottery censer with dentilated ornament.

used, for instance, by the American Indians. Stone drills were also found in the excavations, almost exactly like those found among the North American Indians. (Perhaps theorists who would equate the lost ten tribes with these Indians will now find further reason for the alleged relationship.) Egyptian stone dishes and alabastra, fascinating pottery incense stands and censers (Fig. 10), amethyst, agate, carnelian, quartz, and shell beads, and a fragment of a gold ear-ring were among some of the other small finds.

Much of the material found at Ezion-geber: Elath has a flavor all of its own, and some of it is distinctly unique. The horn- and ledge-handled, hand-made pots, many of them built up on straw mats, are without parallel elsewhere. Filled with ore, some of them were probably set inside furnaces or crucibles. They could then be drawn out by tongs fitted underneath their horn-handles, turned upside down, and the molten metal in them poured

out. A good quantity of the fine, painted, and burnished ware which has come to be known as typical of the Early Iron Age pottery of Edom and Moab, was recovered. A peculiar kind of pottery of excellent make was discovered, with bands of protruding dentilated ornamentation. In general, the impression obtained from the three seasons of excavations is that despite the long control exercised over Ezion-geber: Elath by the Judaeans, its population, pottery and general cultural patterns fit in more with the picture of Eastern Palestine, North Arabia and Sinai, than with Western Palestine. Edomites, Kenites, Kenizzites, and Arabs formed the bulk of the population, among which, however, were numbered Phoenicians, Egyptians, Judaeans, and in time, Babylonians, Persians, and Greeks. The changes of government were probably accepted with the same calm and even indifference that the present inhabitants of 'Aqabah would evince, if tomorrow 'Aqabah fell into the possession of Ibn Saud of Arabia, instead of remaining part of the Emirate of Transjordan under Abdullah and the English.

ISHTAR IN THE NETHER WORLD ACCORDING TO A NEW SUMERIAN TEXT *

SAMUEL N. KRAMER

The myth currently known as "Ishtar's Descent to the Nether World" has come down to us in two versions, the Semitic and the Sumerian.^a The

*We are very grateful to Dr. S. N. Kramer of the Oriental Institute of the University of Chicago for contributing this important article. The first third of the article was prefixed later at the editor's request. Note that in this, more general, part of the paper sh corresponds to s in Sumero-Accadian names mentioned in the second, more tecnical, part.

The text and translation of the Semitic version have been available to scholars and laymen for over half a century. The Sumerian version, on the other hand, has only recently been deciphered, although the tablets and fragments on which the myth is inscribed had been excavated by the University of Pennsylvania in Nippur some fifty years ago. As early as 1914, Stephen Langdon published copies of two fragments located in the Museum of the Ancient Orient of Istanbul. One was a small piece, but the other consisted of the upper half of a large four-column tablet. In 1919 Arno Poebel published three new fragments of the myth which he had uncovered in the University Museum at Philadelphia. Because of the fragmentary nature of all this material, however, and its poor state of preservation, the meaning of the contents remained obscure. In the course of the next decade, Edward Chiera succeeded in locating three new duplicates in the University Museum. More important still, he was fortunate enough to discover there the lower half of the very same four-column tablet whose upper half had been found and copied by Langdon in Istanbul. With the help of this new material uncovered by Chiera (his untimely death in 1933 prevented him from doing more than making copies of part of this material) I succeeded in reconstructing the text of the myth; the study consisting of the reconstructed text together with a translation and detailed commentary was published in 1937. Needless to say, there were numerous gaps and breaks in the text which made the translation and interpretation no easy matter, and the meaning of several of the more significant passages remained obscure. The following year I discovered two additional fragments in the Istanbul Museum of the Ancient Orient while engaged in copying part of its Sumerian "literary" collection from Nippur,